CLAIMS

1. A voltage conversion device, comprising:

a voltage converter (12) converting a power supply voltage from a power supply into an output voltage such that said output voltage attains a target voltage, through a switching operation between a first switching element (Q1) as an upper arm and a second switching element (Q2) as a lower arm; and

a control device (303) providing switching control to said first and said second switching elements using a duty ratio in a range lower than an upper limit value of the duty ratio when an overvoltage is applied to said power supply.

2. The voltage conversion device according to claim 1, wherein said control device (303) includes

duty ratio calculating means (54) calculating said upper limit value of the duty ratio in accordance with said output voltage and a threshold voltage which is a reference value for determining that said overvoltage has been applied to said power supply, and

switching control means (50) providing switching control to said first and said second switching elements (Q1, Q2) using the duty ratio in the range lower than said calculated upper limit value of the duty ratio.

3. The voltage conversion device according to claim 2, wherein said output voltage is supplied to an inverter (14) driving a motor (MG1).

4. The voltage conversion device according to claim 2, wherein said output voltage is supplied to a plurality of inverters (14, 31) provided corresponding to a plurality of motors (MG1, MG2) and connected in parallel with each other.

5. The voltage conversion device according to claim 4, wherein said power supply voltage is obtained from a direct current battery (B).